

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Takafumi YOSHIMURA, et. al.

Serial No. : 10/563,088

Filed : July 1, 2004 (international application date)

For : PROCESS FOR PRODUCING 5-iodo-2-methylbenzoic acid

Art Unit & Examiner : Sudhakar Katakam, Jafar Parsa

DECLARATION UNDER 37 C.F.R. 1.132

COMMISSIONER FOR PATENTS

ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Takafumi Yoshimura who deposes and states that:

1. I graduated from Nagasaki University in March 31.
2. I have been employed by Mitsubishi Gas Chemical Company, Inc. for 19 years as a researcher in the field of halogen compound.
3. That I understand the English language or, at least, that the contents of the Declaration were made clear to me prior to executing the same.
4. The following experiment was carried out by me or under my direct supervision and control.

Experiment

(1) Procedures of Experiment

[Comparative Example 2' ]

In the same apparatus as employed in Example 1, acetic acid (76.5 g), 2-methylbenzoic acid (20.0 g), iodine (14.4 g), a 70% aqueous iodic acid solution (8.6 g), and concentrated sulfuric acid (4.6 g) were placed. The mixture was allowed to react at a reflux temperature of 120°C for seven hours. After completion of reaction, the reaction mixture was cooled to room temperature. The precipitated crystals were collected through filtration,

to thereby yield 26.7 g of a product. Through HPLC (high-performance liquid chromatography) analysis of the collected crystals and the mother liquor, the following reaction results were obtained.

2-methylbenzoic acid: 92.8% (conversion)

5-iodo-2-methylbenzoic acid: 69.2% (yield)

74.6% (selectivity)

3-iodo-2-methylbenzoic acid: 18.8% (yield)

20.3% (selectivity)

5-iodo-2-methylbenzoic acid crystals: 69.3% (yield)

5-iodo-2-methylbenzoic acid: 85.3% (purity in crystals)

Thus, when concentrated sulfuric acid was employed as an acid catalyst, purity and yield of 5-iodo-2-methylbenzoic acid were unsatisfactory.

The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Further deponent saith not.

Signature 吉村 貴史

Takafumi YOSHIMURA

Date MAR. 27. 2009